#### (12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

# (19) World Intellectual Property Organization International Bureau



### 

### (43) International Publication Date 12 May 2005 (12.05.2005)

### **PCT**

## (10) International Publication Number WO 2005/041835 A2

(51) International Patent Classification<sup>7</sup>:

**A61G** 

(21) International Application Number:

PCT/US2004/036416

- (22) International Filing Date: 29 October 2004 (29.10.2004)
- (25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data: 60/515,481

29 October 2003 (29.10.2003)

(71) Applicant (for all designated States except US): TO-MOTHERAPY INCORPORATED [US/US]; 1240

Deming Way, Madison, WI 53717-1954 (US).

- (72) Inventors; and
- (75) Inventors/Applicants (for US only): RUCHALA, Kenneth, J. [US/US]; 121 Richland Lane, Madison, WI 53705 (US). SCHLOESSER, Adam [US/US]; 204 S. 8th Street, Mount Horeb, WI 53572 (US). SCHLOESSER, Eric [US/US]; 210 S. Fifth Street, Mount Horeb, WI 53572 (US). MURRAY, David [NZ/US]; 1264 Deming Way, Apt. #102, Madison, WI 53717 (US).

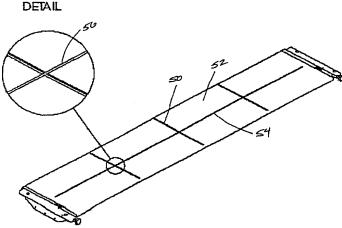
- (74) Agent: BAXTER, William, K.; Godfrey & Kahn, S.C., 780 N. Water Street, Milwaukee, WI 53202 (US).
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

#### Published:

 without international search report and to be republished upon receipt of that report

[Continued on next page]

(54) Title: SYSTEM AND METHOD FOR CALIBRATING AND POSITIONING A RADIATION THERAPY TREATMENT TABLE



(57) Abstract: A system and method for calibrating and positioning a radiation therapy treatment table with a high degree of precision and accuracy. The system and method comprising a treatment table for use with a radiation therapy system with radiographic indexing markers embedded or inlaid in the patient treatment table. The radiographic indexing markers having a density different from density of the table material, or a radio-frequency or magnetic contrasting matter, something that the imaging system and detector of the radiation therapy system can detect, so that when scanned, with or without a patient or phantom on the table, the precise location of the patient treatment table in the x, y and z planes is known. The radiographic indexing markers may also have the ability to be visually seen by the technician, doctor, physicist or other health care provider conducting the procedure. This is important so that the table may be reconstructed, alone or with a phantom on it, by the radiation therapy system software, providing a very good indication of where the table top is prior to treatment.

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.